Epidemiology Report

NORTH DAKOTA DEPARTMENT of HEALTH

September – October 2005

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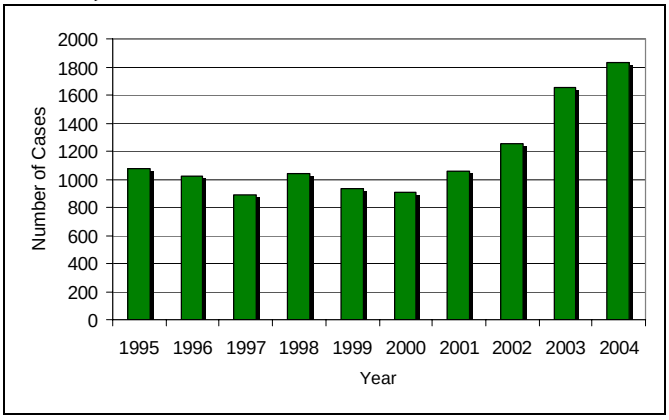
Sexually Transmitted Disease (STD) 2004 Update

Chlamydia

In 2004, 1,835 cases of chlamydia were reported to the North Dakota Department of Health (NDDoH), a 10.9 percent increase from the 1,655 cases reported in 2003 **(Figure 1)**. One thousand two hundred twenty-seven (66.9%) of the cases were reported among females. As in 2003, people age 20 to 24 had the most reported cases with 860 (46.9%), followed by 15- to 19-year-olds with 557 (30.4%) and 25- to 29-year-olds with 268 (14.6%) **(Figure 2)**.

Figure 1. Reported Chlamydia Cases by Year, North Dakota, 1995-2004



More cases were reported among whites than any other race. One thousand seventy-one (58.4%) cases were reported among whites, followed by American Indians with 442 (24.1%), African Americans with 92 (5.0%) and Hispanics with 50 (2.7%). However, minority populations continue to be disproportionately affected by STDs in North Dakota. The chlamydia rate for African Americans for 2004 was 2,349.3 per 100,000 **(Figure 3)**. Among American Indians, North Dakota's largest minority population, the rate was 1,410.8 per 100,000. In comparison, the chlamydia rate for whites in 2004 was 180.6 per 100,000, and the rate for all of North Dakota was 285.7 per 100,000.

Figure 2. Reported Chlamydia Cases by Age Group, North Dakota, 2004

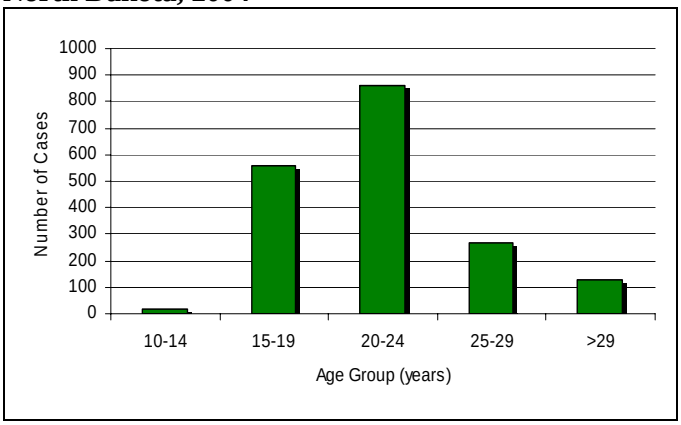
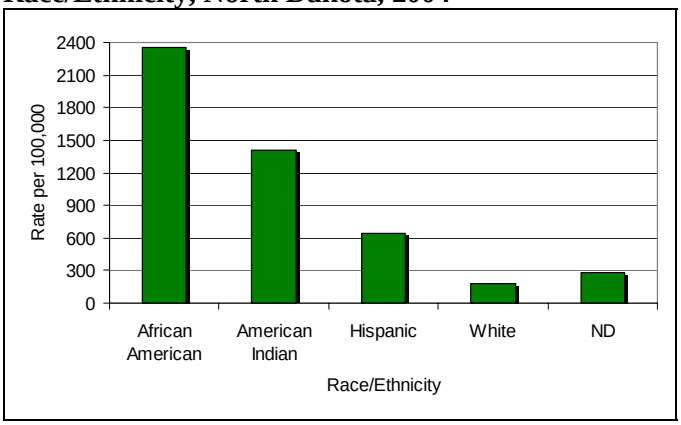


Figure 3. Reported Chlamydia Rates by Race/Ethnicity, North Dakota, 2004



One thousand seven hundred forty-five (95.1%) of the reported cases were reported from 16 counties. The three counties with the highest chlamydia rates are counties with American Indian reservations. Sioux, Benson and Rolette counties reported incidence rates of 1,854.6, 947.7 and 621.6 per 100,000 population, respectively. These rates are significantly greater than the rate of 285.7 per 100,000 for all of North Dakota. Overall, 11 counties (Sioux, Benson, Rolette, Ward, Mountrail, Barnes, Ramsey, Burleigh, Williams, Grand Forks and Hettinger) reported rates greater than the North Dakota rate.

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EQUAL OPPORTUNITY EMPLOYER.

In 2004, 16,782 chlamydia tests submitted from clinics participating in the Region VIII Infertility Prevention Project in North Dakota were analyzed at the Division of Microbiology. Of these, 1,308 (7.8%) were positive.

Nine family planning clinics submitted 9,268 specimens, of which 657 (7.1%) were positive. Of the family planning specimens, 8,315 were from females, of which 478 (5.7%) were positive. Nine hundred fifty-three male specimens were submitted, of which 179 (18.8%) were positive.

Other clinics participating in the Region VIII chlamydia project submitted 7,514 specimens for chlamydia testing; 651 (8.7%) were positive. Of those, 5,392 were from females and 383 (7.1%) were positive.

In 2004, a total of 21,585 chlamydia tests were performed at the NDDoH Division of Microbiology, with 1,612 positive results for a positivity rate (percentage of positive test results) of 7.5 percent. In 2003, in comparison, 17,089 chlamydia tests were performed, of which 1,256 were reported positive, for a positivity rate of 7.3 percent. Although the number of positive tests increased by 28.3 percent, the positivity rate has increased only by 2.7 percent, from 7.3 percent in 2003 to 7.5 percent in 2004.

Gonorrhea

In 2004, 111 cases of gonorrhea were reported to the NDDoH, a 7.8 percent increase over the 103 cases reported during 2003 **(Figure 4)**. Seventy-three (65.8%) of the cases occurred among females, a 23.7 percent increase compared to the 59 cases for the previous year. Thirty-three (29.7%) of cases occurred among 20- to 24-year-olds, and 29 cases (26.1%) occurred among 25- to 29-year-olds, a 123.1 percent increase compared to the 13 cases reported in this age group in 2003 **(Figure 5)**.

Forty-eight cases were reported among whites and 37 cases among American Indians. However, the rates continue to reflect disparity among North Dakota racial and ethnic groups. The gonorrhea rate for African Americans in 2004 was 357.5 per 100,000 **(Figure 6)**. Among American Indians, the rate was 118.1 per 100,000. In contrast, the rate among whites in 2004 was 8.1 per 100,000, and the rate for all of North Dakota was 17.3 per 100,000.

In 2004, gonorrhea cases were reported from 17 counties. Eighty-two (73.9%) cases were reported from five counties: Burleigh, Cass, Grand Forks, Sioux, and Ward. Sioux County, an American Indian reservation, has the highest gonorrhea rate. This county reported a rate of 593.5 per 100,000. The county with the second highest rate was Barnes, with a reported rate of 51.0 per 100,000.

Figure 4. Reported Gonorrhea Cases by Year, North Dakota, 1995-2004

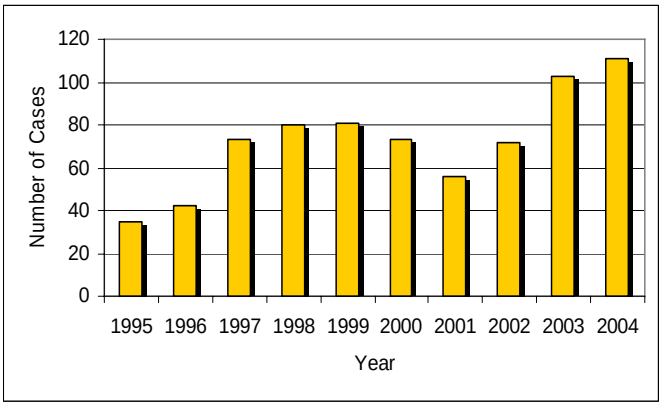


Figure 5. Reported Gonorrhea Cases by Age Group, North Dakota, 2004

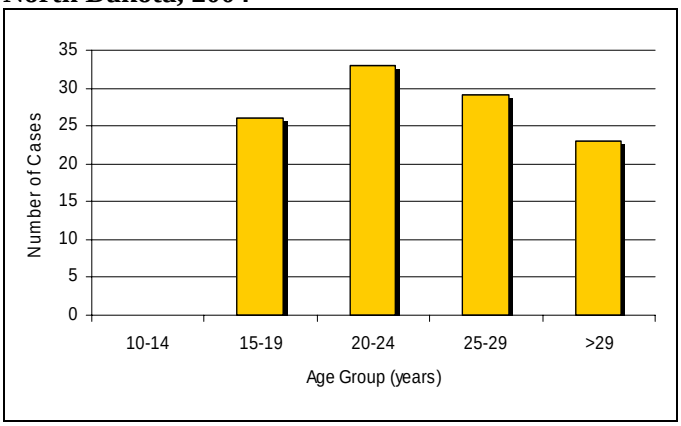
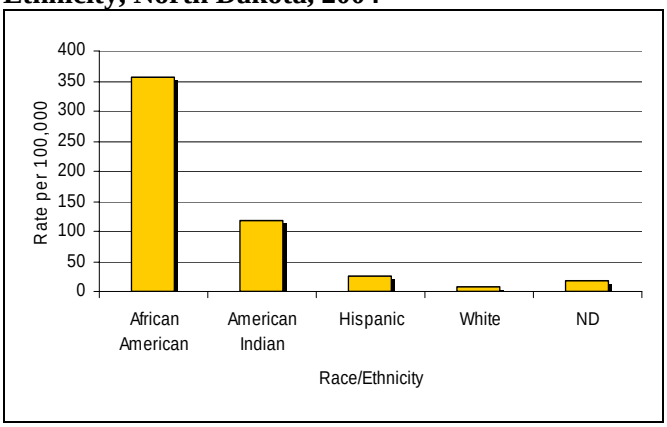


Figure 6. Reported Gonorrhea Rates by Race Ethnicity, North Dakota, 2004



Syphilis

In 2004, no cases of primary, secondary or early latent syphilis were reported to the NDDoH.

For more information about STDs in your region, contact Kim Weis, STD program manager, at 701.328.2385 or kweis@state.nd.us, or your local field epidemiologist. Click here for a listing of the field epidemiologist in your area.

Perinatal Study

The North Dakota Department of Health, Division of Disease Control is in the process of conducting a survey to assess the prevalence of perinatal screening at birthing facilities in North Dakota. The survey involves chart review of labor and delivery records from a random sample of North Dakota's 2003 resident births. There were 26 hospitals identified as birthing facilities in 2003, and from those, a total of 674 labor and delivery charts will be reviewed.

The purpose of this study is twofold: (1) to assess the prevalence of perinatal screening for hepatitis B virus (HBV), group B streptococcus (GBS), HIV, syphilis and rubella and (2) to determine levels of prophylaxis against perinatal transmission of HBV, GBS and HIV.

During the months of July and August 2005, a pilot study was conducted, in which 150 charts were reviewed from five of the larger (greater than or equal to 150 births/year) and five of the smaller (less than 150 births/year) birthing facilities in North Dakota (15 charts from each facility).

Of the 150 charts reviewed:

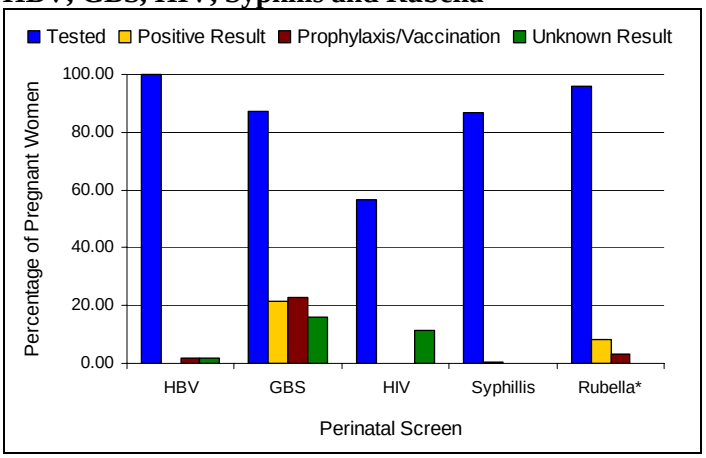
- All of the women were perinatally screened for hepatitis B.
- Ninety-six percent (144 pregnant women) were screened for rubella susceptibility.
- Eighty-seven percent of pregnant women were screened for GBS (131 women) and syphilis (130 women).
- Fifty-seven percent (85) had perinatal HIV screening.

As noted in Figure 7:

- The neonates of two women with unknown HBV status (1.3%) were given prophylaxis that consisted of the first dose of hepatitis B virus vaccine. Upon chart review, no indication of hepatitis B immune globulin (HBIG) administration to the two neonates was documented.
- Thirty-two pregnant women (21%) had a positive GBS status, and 24 women (16%) had an unknown GBS status at the time of delivery. Of these 56 pregnant women, 34 (61%) received intrapartum antibiotics.
- One mother had a reactive serological test for syphilis on her prenatal screen and subsequently was not treated.
- Out of the 12 pregnant women susceptible for rubella (8%), only five (42%) were given MMR vaccine before discharge.

The remaining 524 labor and delivery records will be reviewed within the next year, and a final report will be published upon completion of the study.

Figure 7. Percentage of Pregnant Women Screened for HBV, GBS, HIV, Syphilis and Rubella



*for the purpose of this chart, positive = susceptible.

For more information about this survey, contact Michelle Feist at 701.328.2378, toll-free at 800.472.2180 or at mafeist@state.ns.us.

Reporting HBV Surface Antigen-Positive Pregnant Women

Prenatal hepatitis B surveillance and reporting are vital to the health of North Dakota infants. Screening all pregnant women for the presence of hepatitis B surface antigen (HBsAg) is a crucial step in controlling and preventing the spread of hepatitis B from mother to infant. However, documented HBsAg-positive mothers often are not screened, especially during later pregnancies, and are therefore not reported to the NDDoH. As a result, many at-risk infants may be missed. Prior to birth, the NDDoH ensures that the delivery hospital has both vaccine and Hepatitis B immune globulin (HBIG) on hand, as both should be administered within 12 hours of birth. Infants born to HBsAg-positive mothers are provided both vaccine and HBIG at no charge.

Follow-up of HBsAg-positive mothers, infants and other susceptible sexual or household contacts is done to ensure that the infant and contacts receive three doses of the vaccine, the vaccine is administered appropriately and that the infant receives follow-up testing for anti-HBs. Susceptible contacts are screened and offered vaccine at no charge.

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Summary of Selected Reportable Conditions					
North Dakota, 2004-2005					
Reportable Condition	**September-October 2005***	**January-October 2005***		**September-October 2004**	**January-October 2004**
Campylobacteriosis	17	97		7	99
Chlamydia	282	1,376		339	1,541
Cryptosporidiosis	1	5		2	12
E. coli, shiga toxin positive (non-O157)	4	9		1	7
E. coli O157:H7	10	16		3	14
Enterococcus, Vancomycin-resistant (VRE)	8	21		8	15
Giardiasis	6	20		4	22
Gonorrhea	32	86		20	97
Haemophilus influenzae (invasive)	2	4		1	4
Acute Hepatitis A	0	3		1	2
Acute Hepatitis B	0	0		0	4
Acute Hepatitis C	0	1		3	4
HIV/AIDS	3	14		2	16
Legionellosis	1	7		0	2
Lyme Disease	0	1		0	0
Malaria	0	0		0	3
Meningitis, bacterial[1] (non meningococcal)	0	1		1	7
Meningococcal disease	0	2		0	2
Mumps	2	4		0	1
Pertussis	38	146		79	710
Q fever	0	0		0	0
Rabies (animal)	2	29		8	63
Salmonellosis	18	83		4	39
Shigellosis	0	3		0	3
Staphylococcus aureus, Methicillin-resistant (MRSA)	33	906		268	1,282
Streptococcal disease, Group A[2] (invasive)	4	14		1	11
Streptococcal disease, Group B[2] (infant < 3 months of age)	0	2		1	3
Streptococcal disease, Group B[2] (invasive[3])	5	23		4	32
Streptococcal disease, other[2] (invasive)	7	21		4	19
Streptococcal pneumoniae[2], (invasive, children < 5 years of age)	1	6		2	4
Streptococcal pneumoniae[2] (invasive[4])	15	47		5	43
Streptococcus pneumoniae[2], drug-resistant	0	2		0	0
Tuberculosis	0	6		1	4
West Nile Virus Infection	10	86		0	20

*Provisional data

[1] Meningitis caused by *Staphylococcus aureus* and *Streptococcus pneumoniae.*

[2] Includes invasive infections caused by streptococcal disease not including those classified as meningitis.

[3] Includes invasive infections of streptococcal, Group B, disease in persons $\geq$ 3 months of age.

[4] Includes invasive infections caused by *Streptococcus pneumoniae* in persons $\geq$ 5 years of age.